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REMARKS/ARGUMENTS

Applicant thanks the Examiner for his attention to this application. The present remarks are made in the order of issues raised by the Examiner in his Action.

Claim Rejections – 35 USC § 102

The Examiner has rejected claims 1, 5-8, 10 and 13 in view of Belotserkovsky (US Patent No. 6,704,374). Claims 1-5 and 8-11 have been amended to clarify the scope of protection sought.

Belotserkovsky describes a system for local oscillator frequency correction for an Orthogonal Frequency Division Multiplexing (OFDM) signal. The system of Belotserkovsky samples an incoming signal, in the time domain, and correlates the samples with a stored version of a training symbol, also called a reference symbol, so as to generate a correlation sequence. More particularly, the correlation is performed on complex signals, as described on column 5, lines 10-13.

In contrast, the present invention of amended claim 1 performs correlation of the real and imaginary parts of the incoming signal and sequence of bits, after a signum function has been applied thereto, thus resulting on correlating single-bit valued numbers. Belotserkovsky does not describe nor teach the correlation of the single-bit valued number corresponding to real and imaginary parts of the incoming signal and sequence of bits of the present invention. Therefore, Applicant submits that claim 1 is not anticipated and is thus patentable in view of Belotserkovsky.

Claims 5-8 depend directly or ultimately from claim 1, and are believed patentable in view of Belotsekovsky for the same reasons as provided for claim 1.

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Claim 10 relates to a synchronizer for determining when an incoming signal matches at least one known coefficient. More particularly, the synchronizer comprises a quantizer, a correlator and a selector. The quantizer determines a quantization bit indicative of an arbitrary power value of the incoming signal, by applying a signum function to the arbitrary power value. Then, the correlator correlates the quantization bit with the at least one known coefficient to obtain a correlated signal. The correlated signal is used by the selector to select the correlated signal when the correlated signal matches a given criterion.

As previously discussed in support of claim 1, Belotserkovsky only describes and teaches the performing of the correlation performed on complex signals. Therefore, Applicant submits that claim 10, and claim 13 which depends therefrom, are not anticipated and are patentable in view of Belotserkovsky.

Claim Rejections – 35 USC § 103

Claim 14 stands rejected under 35 USC 103(a) as being unpatentable over Belotserkovsky. Claim 14 depends from claim 10, which is novel and not obvious in view of Belotserkovsky. It is therefore submitted that claim 10 is patentable for the same reasons as provided in support of claim 10.

Allowable subject matter

Applicant thanks the Examiner for his allowance of claim 9, and for only objecting to claims 2-4, 11 and 12.

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Conclusion

Should the Examiner believe that any issues remain outstanding in the present application, Applicant invites the Examiner to reach the undersigned by telephone to discuss such remaining issues.

In view of the foregoing, Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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